

# Winter 2007-2008 Climate Forecast



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*Oregon-AMS Meeting, OMSI, Portland*

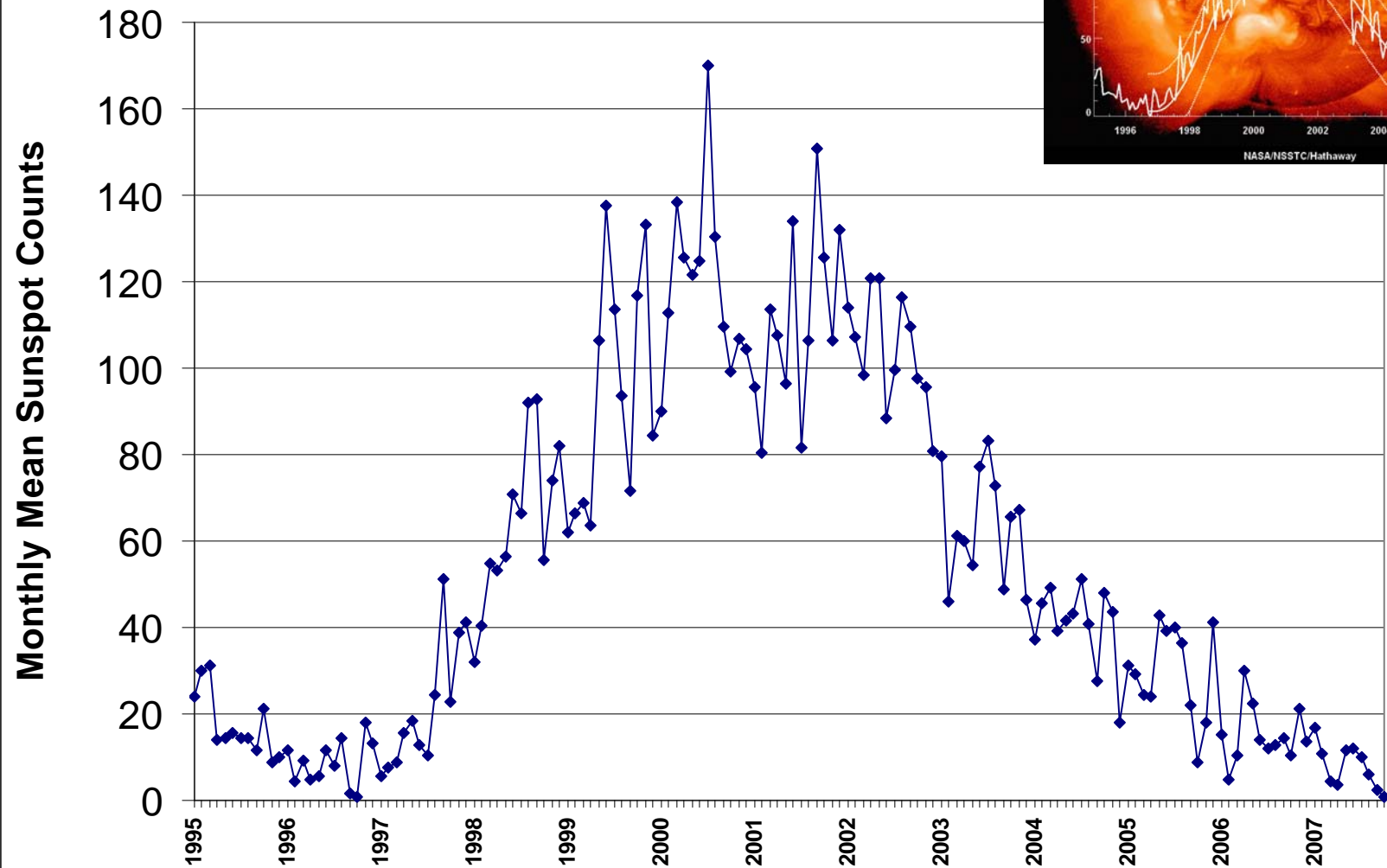
Columbia River Inter-Tribal Fish Commission  
Portland, Oregon

# Introduction – Methods

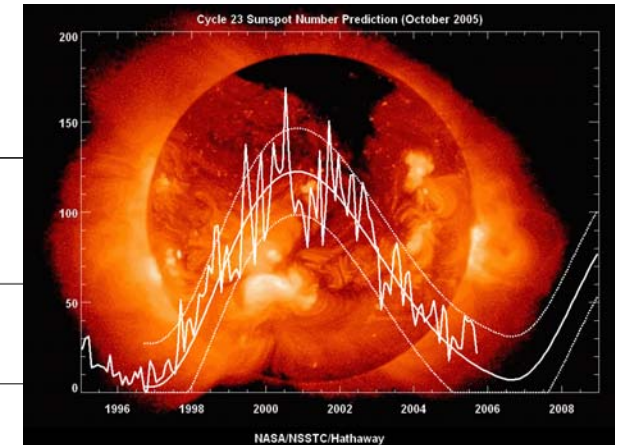


- Forecast uses the Tribal approach-- holistic.
- Big-picture: Solar-Forcing (e.g., sunspot cycles) does influence our global weather patterns.  
*In memoriam:* Dr. Landscheidt, 1922 – 2004.
- Track ENSO with the Multi-variable ENSO Index.
- Sea-Surface Temperature Departure Forecasts.
- Hydro-Climate approach: Water year 2008 volume forecast used regressed Multi-variable ENSO Index vs. historic runoff for the Columbia at The Dalles.

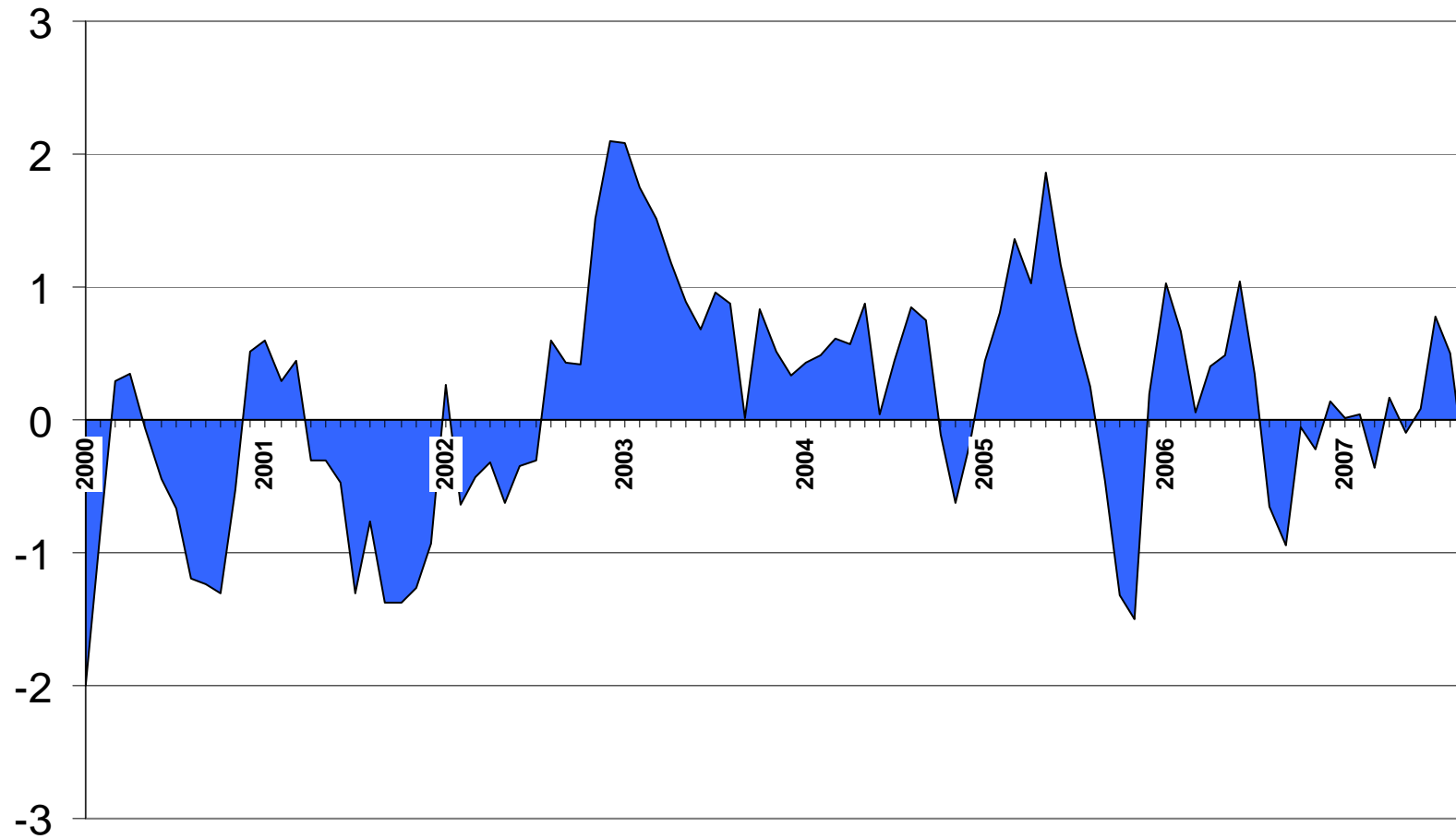
## OBSERVED SUNSPOTS



Source: NOAA - National Geophysical Data Center



## PACIFIC DECADAL OSCILLATION (PDO)



Source: UW-Climate Impacts Group

# SEA SURFACE TEMPERATURE DEPARTURE FORECAST

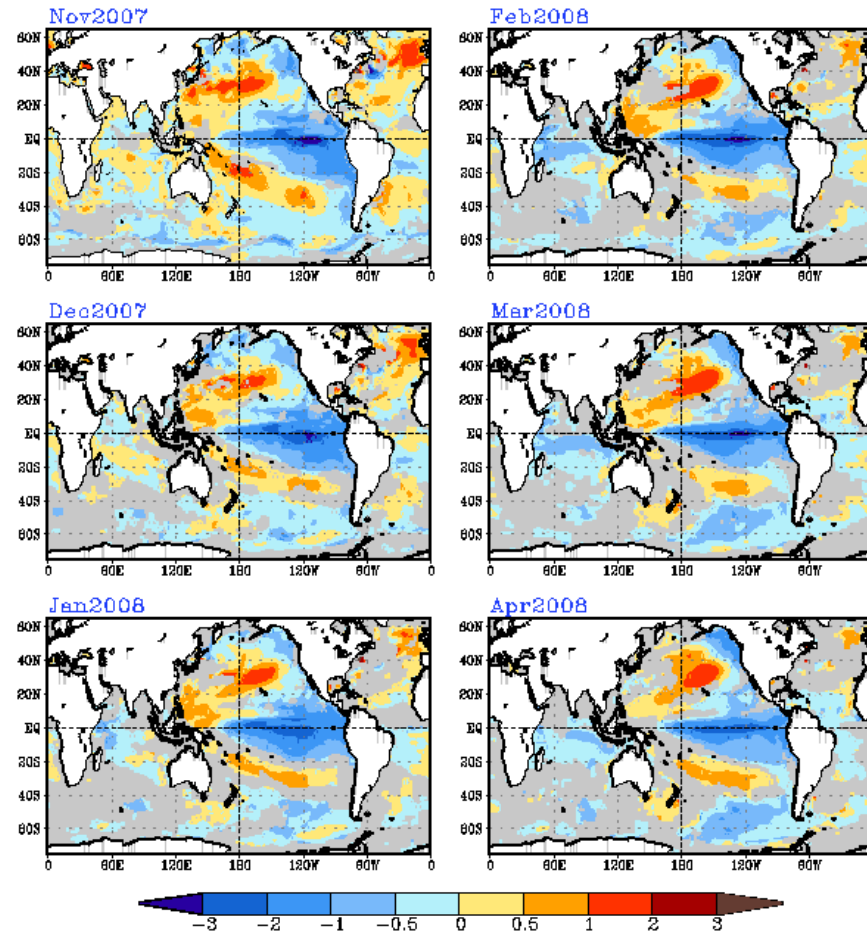


NWS/NCEP

Last update: Fri Nov 9 2007

Initial conditions: 13Oct2007–01Nov2007

## CFS monthly SST forecast (K)



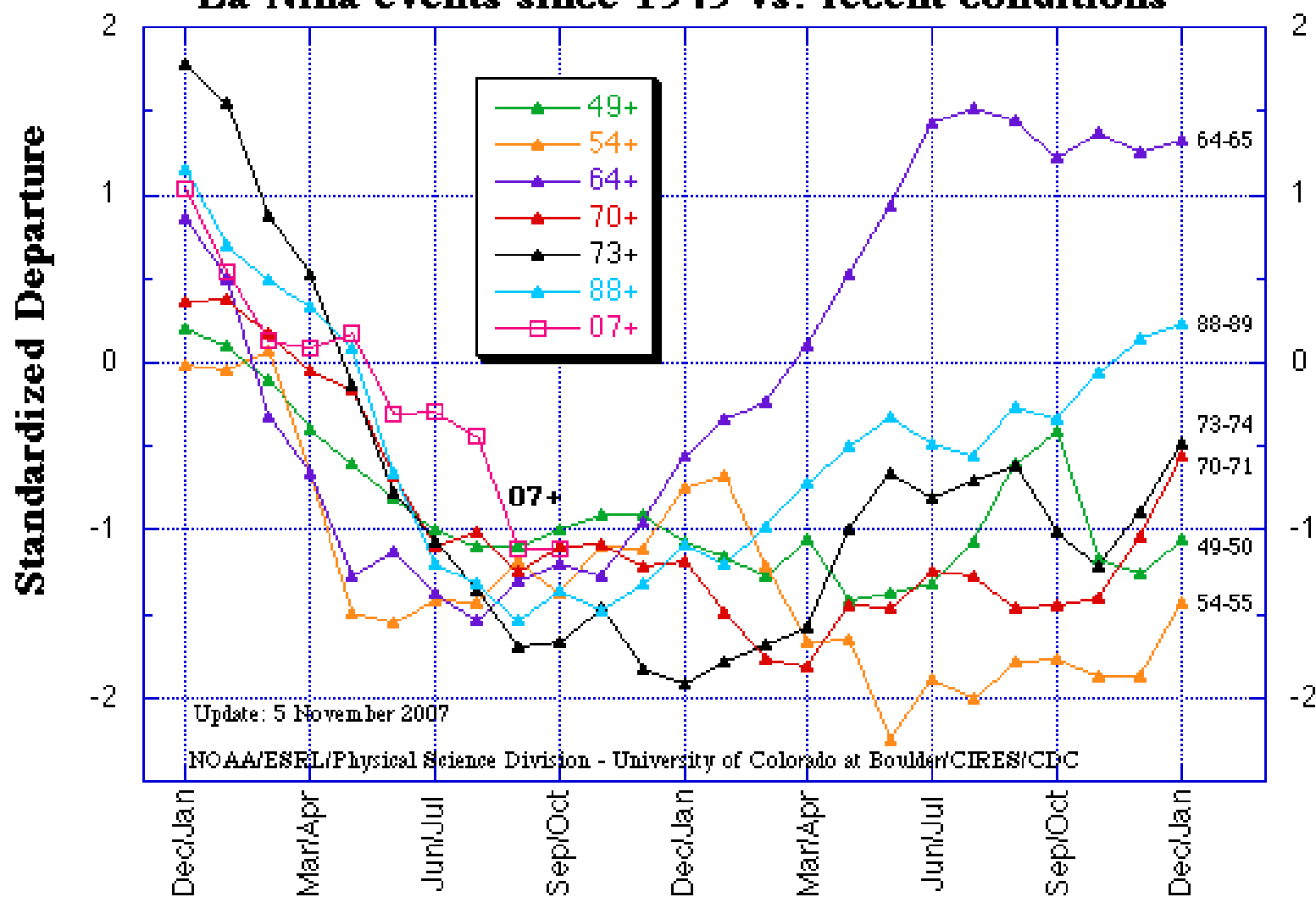
Ensemble average of 40 members from initial conditions of 13Oct2007 to 01Nov2007.

Base period for climatology is 1982–2003. Base period for bias correction is 1982–2003.

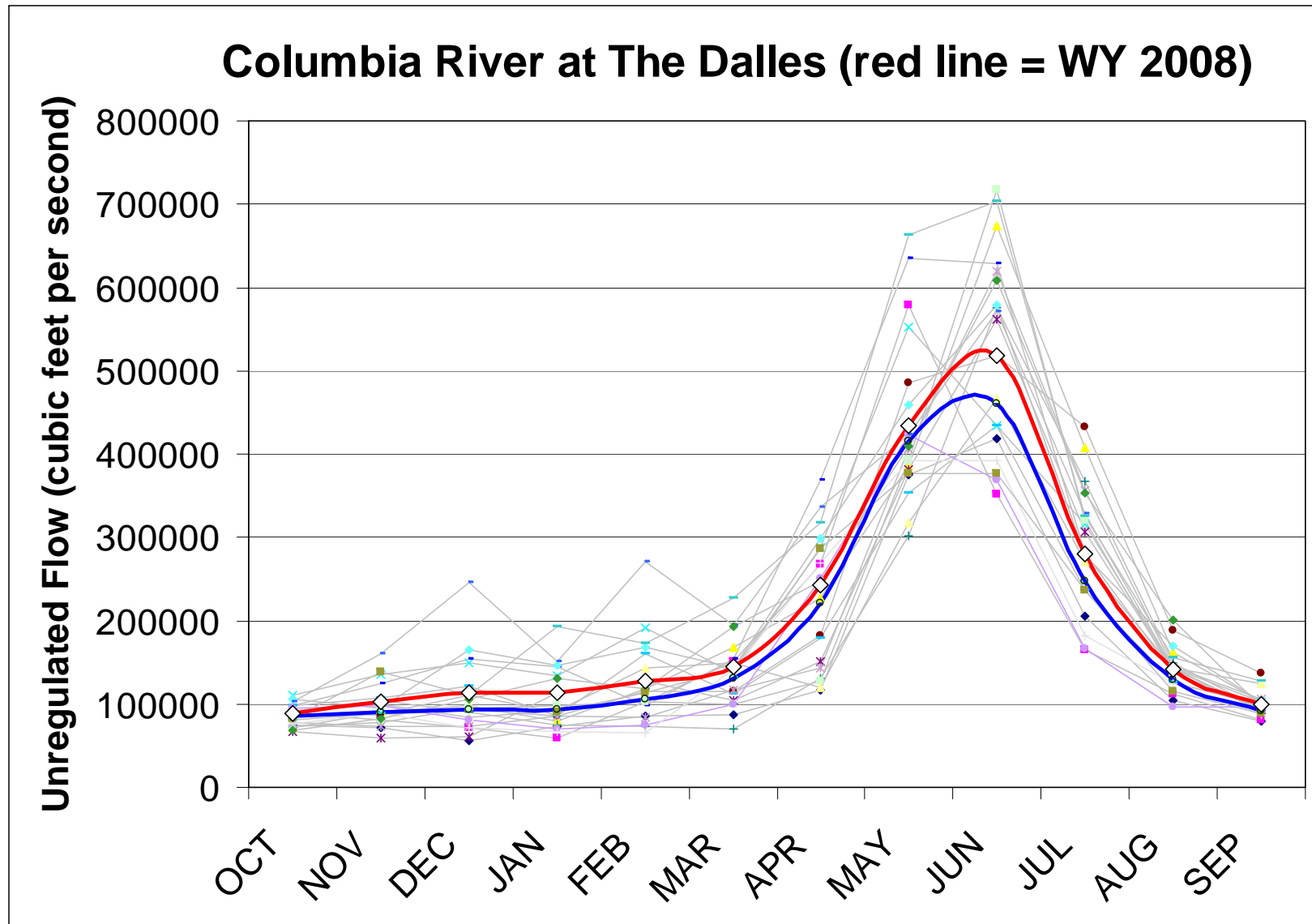
Forecast skill in grey areas is less than 0.3.

## MEI-- MULTI-VARIABLE EL NINO INDEX

### Multivariate ENSO Index (MEI) for 6 strong La Niña events since 1949 vs. recent conditions



## ENSEMBLE STREAMFLOW FORECAST



Blue line = long-term average (WY 1929-2007)

# Summary: The Forecast



Month:	Temperature (mean monthly):	"Hedge"	Precipitation (% normal):	"Hedge"
November	Near Normal (-1.8 to + 1.8 degF)	0.1	Above Normal (110 - 130%)	128%
December	Near Normal (-1.8 to + 1.8 degF)	-0.1	Near Normal (90 - 110%)	90%
January	Near Normal (-1.8 to + 1.8 degF)	0.6	Near Normal (90 - 110%)	109%
February	Near Normal (-1.8 to + 1.8 degF)	-0.8	Near Normal (90 - 110%)	106%
March	Near Normal (-1.8 to + 1.8 degF)	-1.2	Near Normal (90 - 110%)	103%

*...but what about snow events?!*

Expect three events...with one significant event to "shut down Portland"